

IN THE CLAIMS

- 1-19. (Cancelled)
20. (New) An infection and transduction competent, lentivirus-based retroviral vector particle comprising a genome, gag, pol, an envelope protein, wherein the particle lacks a functional lentiviral tat gene product.
21. (New) The retroviral vector particle according to claim 20, further comprising a functionally active rev or one or more RRE-type sequences.
22. (New) The retroviral vector particle according to claim 20, further comprising a nucleic acid sequence which encodes one or more gene products of interest.
23. (New) The retroviral vector particle according to claim 22, wherein the gene product of interest is a therapeutic protein.
24. (New) An isolated cell comprising the retroviral vector particle of claim 22.
25. (New) A composition comprising the retroviral vector particle of claim 22 and a carrier.
26. (New) A composition comprising the retroviral vector particle of claim 23 and a carrier.
27. (New) A method for expressing a gene of interest or replicating a nucleic acid molecule encoding a gene product of interest comprising contacting a cell with the retroviral vector particle of claim 22.
28. (New) A method for expressing a gene of interest comprising introducing a gene of interest into a cell by contacting the cell with the retroviral vector particle of claim 22.
29. (New) A retroviral vector production system for producing the retroviral vector particle according to claim 20, wherein the system comprises one or more nucleic acid sequences encoding the genome of the retroviral vector particle, gag, pol, and an envelope protein, and optionally comprising a functionally active rev or one or more RRE-type sequences, wherein the particle lacks a functional lentiviral tat gene product.
30. (New) The retroviral vector production system according to claim 29, wherein the nucleic acid sequence encoding the genome of the retroviral vector further comprises one or more genes of interest.
31. (New) The retroviral vector production system according to claim 30, wherein the gene of interest encodes a therapeutic protein.

32. (New) The retroviral vector production system according to claim 29, wherein the nucleic acid sequences include three DNA constructs which encode: (i) the genome of the vector particle, (ii) gag and pol proteins, and (iii) the envelope protein, respectively.

33. (New) A retroviral vector particle produced by the system according to claim 30.

34. (New) A method for expressing a gene product comprising introducing a gene of interest into a cell by contacting the cell with the retroviral vector particle according to claim 33.

35. (New) A composition comprising the retroviral vector particle according to claim 33 and a carrier.

36. (New) An isolated cell comprising the retroviral particle of claim 33, wherein the particle is on or in the cell.

37. (New) The retroviral vector particle according to claim 33, wherein the gene of interest encodes a therapeutic protein.

38. (New) A method for expressing a gene product comprising introducing a gene of interest into a cell by contacting the cell with the retroviral vector particle according to claim 37.

39. (New) An isolated cell comprising the retroviral particle of claim 37, wherein the particle is on or in the cell.

40. (New) The retroviral production system of claim 29, wherein the genome includes an operable promoter.

41. (New) The retroviral production system of claim 40, wherein the promoter is a non-retroviral promoter.

42. (New) A set of isolated nucleic acid sequences encoding the components of the retroviral vector particle according to claim 20, comprising a first DNA construct which encodes the genome of the vector particle, a second DNA construct which encodes gag and pol proteins, and a third DNA construct which encodes an envelope protein, wherein one of the DNA constructs optionally comprises a functionally active rev or one or more RRE-type sequences, and wherein the particle lacks a functional lentiviral tat gene product.

43. (New) The set of nucleic acid sequences of claim 42, further comprising one or more genes of interest.

44. (New) The set of nucleic acid sequences of claim 42, wherein the genome includes an operable promoter.

45. (New) The set of nucleic acid sequences of claim 44 wherein the promoter is a non-retroviral promoter.

46. (New) A method for producing the retroviral vector particle as claimed in claim 20, comprising co-expressing, in a retroviral producer cell, one or more nucleic acid sequences encoding the genome of the vector particle, gag and pol proteins, and an envelope protein, and, optionally comprising a functionally active rev or one or more RRE-type sequences, wherein the particle lacks a functional lentiviral tat gene product.

47. (New) The method of claim 46, wherein the one or more nucleic acid sequences include one or more genes of interest.

48. (New) The method of claim 46, wherein the co-expressing is of a first DNA construct encoding the genome of the vector particle, a second DNA construct encoding gag and pol proteins, and a third DNA construct encoding the envelope protein, wherein one of the DNA constructs optionally comprises a functionally active rev or one or more RRE-type sequences.

49. (New) The method of claim 46, wherein the co-expressing includes expressing a DNA construct which encodes gag and pol proteins independent of tat gene.

50. (New) The method of claim 46, wherein the genome further includes an operable promoter.

51. (New) The method of claim 50 wherein the promoter is a non-retroviral promoter.

52. (New) An isolated nucleic acid sequence encoding the components of the retroviral vector particle as claimed in claim 20, comprising one or more DNA constructs encoding the genome of the vector particle, gag and pol proteins, and an envelope protein, wherein the nucleic acid sequence produces the retroviral vector particle, wherein the DNA construct(s) optionally comprise(s) a functionally active rev or one or more RRE-type sequences, and wherein the particle lacks a functional lentiviral tat gene product.

53. (New) The retroviral vector production system according to claim 29, wherein the retroviral vector particle is based on HIV-1.

54. (New) The retroviral vector particle according to claim 20, wherein the retroviral vector particle is based on HIV-1.

55. (New) The retroviral vector particle according to claim 20, wherein the envelope protein is VSV-G.

56. (New) The retroviral vector production system according to claim 29 comprising at least one RRE-type sequence, wherein the at least one RRE-type sequence comprises a constitutive transport element (CTE).

57. (New) The retroviral particle according to claim 21, wherein at least one RRE-type sequence comprises a constitutive transport element (CTE).

58. (New) The retroviral vector production system according to claim 56, wherein the constitutive transport element (CTE) is a Mason Pfizer monkey virus CTE.

59. (New) The retroviral vector particle according to claim 57, wherein the constitutive transport element (CTE) is a Mason Pfizer monkey virus CTE.

60. (New) The set of isolated nucleic acid sequences according to claim 42, wherein the gene encoding tat is absent from or disrupted in the set of sequences, and is not functionally expressed in producer cells.

61. (New) The method of claim 46, wherein the gene encoding tat is absent from or disrupted in the set of sequences, and is not functionally expressed in producer cells.

62. (New) The isolated nucleic acid sequence according to claim 52, wherein the gene encoding tat is absent from or disrupted in the set of sequences, and is not functionally expressed in producer cells.